Draft Recommendations to RGGI for Including New Forest Offset Categories: A Summary

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Background

The Regional Greenhouse Gas Initiative[1] (RGGI) is a cap-and-trade system designed to limit the emissions of greenhouse gases (GHGs) from electricity generation in 10 northeastern states starting in 2009. Power plants seeking to meet their RGGI obligations have the option to **offset** a portion of their emissions through projects that reduce emissions or sequester carbon in other sectors (such as forestry).

The Maine Forest Service, Environment Northeast (ENE), Manomet Center for Conservation Sciences, and the Maine Department of Environmental Protection have been asked by the RGGI Staff Working Group to propose recommendations for possibly expanding forest carbon offset project types in RGGI. This document represents a brief summary of our draft recommendations at this time. Please note that these are **only draft** recommendations; they continue to be modified as we receive valuable feedback from stakeholders in the region. We welcome your feedback on the current iteration of our recommendations (see contact information at bottom).[2]

In general, forest projects can reduce emissions or sequester carbon in three main ways[3]:

1. **Afforestation** (planting trees on currently non-forested land).
2. **Avoided deforestation** (preventing or reducing conversion of a forest to non-forest, thereby avoiding emissions from existing stored carbon).
3. **Active Forest Management** (changing management practices to sequester additional carbon).

Currently, **afforestation projects** are the only forest projects that qualify to offset greenhouse gas emissions in the proposed RGGI rule. There is limited opportunity for afforestation to play a role in offsetting emissions in the Northeast because so much of the region is already forested. RGGI presently excludes *existing* forest from being eligible in the offset program in part because of lack of consensus over how such projects could meet the RGGI 5-part offset project criteria (offsets must be *real, additional, verifiable, enforceable, and permanent*[1]). Two other carbon offset programs in the U.S. do allow existing forests to play a role in offsetting emissions – the California Climate Action Registry, and the Chicago Climate Exchange – thus, there is a precedent for project protocols that can demonstrate compliance with criteria similar to the RGGI 5-part test.

We are proposing that RGGI include **active forest management** as an offset category in the RGGI system. We are further proposing that RGGI include **afforestation on urban and community lands**, **reduced impact development**, and **biomass plantation**s. While the opportunity for these other three project types may be more limited, we believe they provide a valid offset mechanism and should be considered. Below is a brief summary of our recommendations. A more detailed document will be available by late May 2008.

I. Active Forest Management (Draft Recommendation)

1. Using the FIA[4] (federal forest inventory dataset) mean stocking level for a given forest class as a benchmark for "business as usual"[5], forest landowners can get carbon credit

[1] www.rggi.org
[2] Contact Ellen Hawes, Environment Northeast, (207) 761-4566; ehawes@env-ne.org
[3] Different offset systems have different names for types of forest projects.
[4] http://fia.fs.fed.us/
[5] Analysis is underway to determine the appropriate categories and geographic regions to use when calculating FIA means.

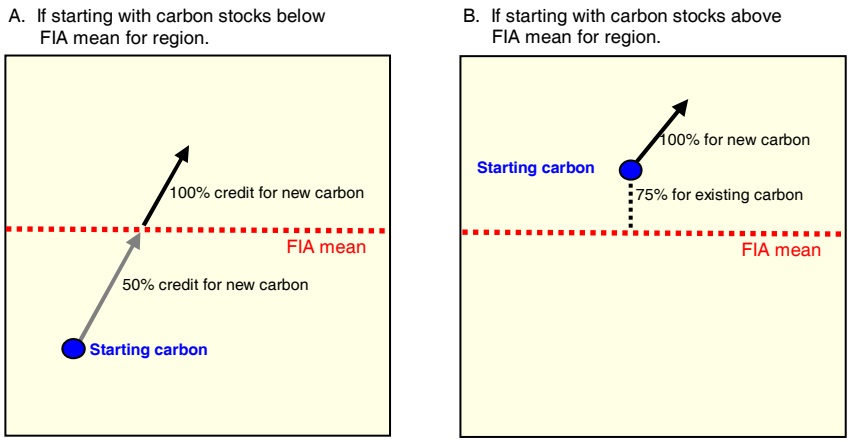

Figure 1. Recommended carbon credit for projects that start (A) **below** the FIA mean carbon stocking level for the forest type and region, and (B) **above** the FIA mean.

for <u>new</u> carbon growth and/or <u>preserving</u> existing carbon stocks according to the criteria below.

CRITERIA

a. If the current stocking level is <u>below the FIA mean</u>, a landowner can get 50% credit for new growth after the base year (project start date) (*Figure 1A*). The landowner must agree to reach the FIA mean level and to hold the stocking at or above the FIA mean level for 99 years.
b. If the current stocking level is <u>above the FIA mean</u> (*Figure 1B*), a landowner can get 75% credit for preserving existing carbon above the FIA mean (i.e., at the project start date), and 100% credit for any additional carbon grown after the start date. Landowners can get a lump-sum single payment for existing carbon stocks above the FIA mean (at 75% of current carbon value). Periodic payments (*e.g.*, 5 yr intervals) will be available for new growth after the starting year.
c. Once a landowner has been paid for carbon stocks, the landowner (and subsequent owners) must agree not to drop below the **sold** stocking level for 99 years[6]. A reserve pool of carbon or insurance may be required to guard against unforeseen loss.
d. To guard against leakage (carbon loss in areas outside of the of the project area caused by displacement of harvest activities), landowners will be <u>required to actively manage the forest</u> for forest products. Landowners must document that they are managing their forest in one of two ways:
    i. Be certified sustainable by a third-party under a generally accepted certification system that requires long-term management plans (*e.g.*, SFI, FSC, American Tree Farm), or
    ii. Verify that they are harvesting at a rate that approximates the business-as-usual harvest rate for the appropriate geographic area[7].
e. NOTE: Development rights would NOT be completely extinguished with this recommendation. Landowners or aggregators must maintain the total additional carbon stocks sold within the project area for 99 years. If changes in land use or harvests reduce carbon stocks on a portion of the ownership, this must be made up for with long-term increases elsewhere. At the end of the project crediting period[8], when carbon ceases to be monitored, an additional long-term contract may be required to ensure a majority of the property remains forested over the remainder of the 99 years.

[6] Carbon sequestration should be permanent, because climate change is century-scale problem. Sequestered carbon must not leak back into the atmosphere, intentionally or unintentionally. However, because it is impossible to know what circumstances might exist in future centuries, we recommend that landowners be released from the commitment in 99 years.

[7] Average harvesting rates may be determined using FIA removal rates or other state-level data. There will be some margin of flexibility, e.g. harvesting rates should not be more than 25% lower than average rates

[8] The RGGI project crediting period is 20 years, renewable up to 60 years..

2. **Landowners may receive extra credit for carbon stored in enduring wood products or for displacement of fossil fuel energy (*i.e.*, biomass), but only for production in excess of business-as-usual production levels for the appropriate geographic area (*i.e.*, the mean production level per acre of forestland).**

   NOTES
   a. Carbon stored in product is calculated based on the estimated residual carbon 100 years after harvest.
   b. Displacement of fossil fuel energy will be credited based on the amount of biomass (in excess of the mean biomass harvested per acre for the forest class) delivered to a heating facility.

II. Avoided Deforestation (Draft Recommendation)

1. **At the present time, <u>we do not recommend</u> that RGGI give offset credit for avoided deforestation projects that involve permanently protecting forestland on which no residential or commercial development will be allowed. We feel the potential problem with leakage (displacement of development) and the timing of development threat undermines the credibility of using this to offset emissions in the power sector on a one-to-one basis. However, this is an important climate strategy, and RGGI states should explore mechanisms other than offsets for providing financial incentives to conserve forest land.**

2. **However, development projects that reduce the amount of forestland (carbon) lost per housing unit can receive credit based on the difference between total land clearing in traditional development projects and "clustered" development.**

   NOTES
   a. Projects are eligible in areas where clustered development falls below a certain market penetration rate (tbd).
   b. Areas that remain forested within the development must be permanently protected with an easement.

III. Urban and Community Forestry (Draft Recommendation)

1. **Communities can receive credit for afforestation of urban areas through planting of street trees and park trees.**

   NOTES
   a. Currently, afforestation credits are restricted to converting non-forest land to forest land. Planting street trees would not be eligible, as these areas would continue to be classified as non-forest. The RGGI afforestation category should be expanded to include planting trees in urban areas.
   b. An inventory of street and/or park trees is made at the start of the project, and credit is given for carbon stored in any additional trees planted.
   c. The community must commit to maintaining this increased inventory of street or park trees over 99 years.

IV. Biomass Plantations (Draft Recommendation)

1. **Newly established biomass plantations (using woody species or other energy crops, such as switchgrass) can receive credit for displacement of fossil fuels used for residential and commercial heating[9].**

NOTES

a. Plantations that are established on non-forest or poorly-stocked land can receive credit for one-time increases in carbon stored in the root system, in addition to credit from production of wood chips and pellets.
b. The climate benefit of using biomass in the place of fossil fuels is based on the assumption that biomass is carbon neutral (i.e. emissions can be considered to approach zero, because regrowth balances out the CO_2 emissions from combusting biomass).
c. If plantations are established on forested land, they cannot begin receiving credits until onsite carbon stocks are equal to or greater than carbon stocks prior to establishment of the plantation.
d. Credits will be based on the relative life-cycle CO_2 emissions of generating a unit of energy from biomass vs. the fossil fuel it is displacing.
e. A project must be able to prove that the biomass is being used displace fossil fuel, through fuel switching or new capacity in residential and commercial heating.[10]

[9] Because RGGI caps emissions in the electricity sector, increased efficiency and renewable energy in the electricity sector are not eligible as offsets.

[10] At this point, we have not proposed an adequate mechanism for proving this. Inclusion of this category in final recommendations is dependent upon further development of appropriate protocols.